

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

Claims 1-12 (canceled)

13. (new) A process of a conversion of heat energy into mechanical energy by means of periodical changing volume, pressure and temperature of a work medium, in separate chambers of an internal combustion engine, comprising the steps of:

sucking the work medium into a first stage chamber by enlarging the volume of the first stage chamber;

transferring the work medium from the first stage chamber into a second stage chamber, concurrently with decreasing the volume of the first stage chamber and increasing the volume of the second stage chamber;

transferring the work medium from the second stage chamber through a third stage chamber to a fourth stage chamber while supplying heat in the third stage chamber, concurrently with decreasing the volume of the second stage chamber and increasing the volume of the fourth stage chamber;

transferring the work medium from the fourth stage chamber to a fifth stage chamber, concurrently with decreasing the volume of the fourth stage chamber and increasing the volume of the fifth stage chamber; and

discharging the work medium from the fifth stage chamber by decreasing the volume of the fifth stage chamber,

wherein mechanical energy is consumed when decreasing the volume of the first stage chamber and decreasing the volume of the second stage chamber, and mechanical energy is carried away when increasing the volume of the fourth stage chamber and increasing the volume of the fifth stage chamber.

14. (new) A process according to claim 13, further comprising the step of:
cooling the work medium during transfer from the first stage chamber into the second
stage chamber.

15. (new) A process according to claim 13, further comprising the step of:
transferring the work medium from the fifth stage chamber to the first stage chamber
while cooling the work medium and concurrently decreasing the volume of the fifth stage
chamber and increasing the volume of the first stage chamber.

16. (new) A process according to claim 13, further comprising the step of:
transferring the work medium from the fourth stage chamber to the first stage
chamber while cooling the work medium, concurrently with decreasing the volume of the
fourth stage chamber and increasing the volume of the first stage chamber.

17. (new) A process according to claim 13, further comprising the step of:
transferring the work medium from the fifth stage chamber by decreasing the volume
of the fifth stage chamber to a heat exchanger creating an out part of the third stage chamber
for transmission of the heat energy of the work medium to the third stage chamber.

18. (new) An apparatus for conversion of heat energy into mechanical energy by
means of periodical changing volume, pressure and temperature of a work medium in
separate chambers of an internal combustion engine with revolving pistons, comprising:
a first stage chamber having a variable volume and a second stage chamber having a
variable volume, the largest volume of the first stage chamber being larger than the largest
volume of the second stage chamber;

a third stage chamber having a constant volume; and
 a fourth stage chamber having a variable volume and a fifth stage chamber having a variable volume, the largest volume of the fifth stage chamber being larger than the largest volume of the fourth stage chamber, and the largest volume of the fifth stage chamber being larger or equal to the largest volume of the first stage chamber,
 wherein the revolving pistons of the chambers having a variable volume are mechanically connected by a propeller shaft.

19. **(new)** An apparatus according to claim 18, wherein the fifth stage chamber is provided with an intake valve.

20. **(new)** An apparatus according to claim 18, wherein a work medium inter stage cooler is placed between the first stage chamber and the second stage chamber.

21. **(new)** An apparatus according to claim 18, wherein the third stage chamber is a combustion chamber or a heat exchanger.